to those embodiments. Alternative embodiments, examples, and modifications which would still be encompassed by the invention may be made by those skilled in the art, particularly in light of the foregoing teachings.

Furthermore, those skilled in the art will appreciate that various adaptations and modifications of the above-described preferred embodiments can be configured without departing from the scope and spirit of the invention. Therefore, it is to be understood that, within the scope of the appended claims, the invention may be practiced other than as specifically described herein.

We claim:

1. A method for providing a cognitive performance level comprising:

receiving a data series representing at least one wake state and at least one sleep state,

selecting a function based on the data series,

determining a cognitive performance capacity using the selected function,

modulating the cognitive performance capacity with a time of day value, and

providing the modulated value.

2. The method according to claim 1, further comprising repeating the selecting, determining, and modulating steps for at least two pieces of the data series.

3. The method according to claim 2, wherein the providing step includes displaying the modulated value to an individual located proximate to where the data series is received.

4. The method according to claim 1, wherein the time of day value is selected from a series of time of day values representing a curve having a period of 24 hours.

5. The method according to claim 1, wherein the selecting step selects the function from a group consisting of a wake function, a sleep function, and a sleep inertia function.

6. The method according to claim 1, wherein the selecting step selects the function from a group consisting of a wake function, a sleep function, a delay function, and a sleep inertia function.

7. The method according to claim 1, further comprising:

storing the predicted cognitive performance level, and

repeating the selecting, determining, modulating, and storing steps at least once.

8. The method according to claim 7, further comprising plotting a curve based on the stored predicted cognitive performance levels.

9. An apparatus for providing a cognitive performance level comprising:

means for receiving a data series having at least one wake state and at least one sleep state,

means for selecting a function based on the data series,

means for determining a cognitive performance capacity using the selected function,

means for storing a series of time of day values,

means for modulating the cognitive performance capacity with a corresponding time of day value, and

means for providing the modulated value.

10. The apparatus according to claim 9, wherein the selecting means selects the function from a group consisting of a wake function, a sleep function, and a sleep inertia function.

11. The apparatus according to claim 9, wherein the selecting means selects the function from a group consisting of a wake function, a sleep function, a delay function, and a sleep inertia function.

12. The apparatus according to claim 9, wherein the stored time of day values represent a curve having a period of 24 hours.

13. A method for determining a cognitive performance level comprising:

inputting a data series having wake states and sleep states of an individual,

selecting a function based on the wake states and sleep states in the data series,

calculating a cognitive performance capacity based on the selected function,

modulating the cognitive performance capacity with a time of day value, and

outputting the modulated value as the predicted cognitive performance.

14. The method according to claim 13 further comprising:

storing the predicted cognitive performance,

repeating the selecting, calculating, modulating and outputting steps of claim 13,

plotting a curve from the stored modulated values, and

outputting the curve representing cognitive performance level over time.

15. The method according to claim 14, wherein the data series includes past information such that the curve is used to determine the cognitive level of an individual at an earlier time.

16. The method according to claim 14, further comprising extrapolating from the curve a predictive curve based on anticipated wake states and anticipated sleep states.

17. The method according to claim 13, wherein said outputting step includes outputting the predicted cognitive performance to a display.

18. The method according to claim 13, wherein said outputting step includes outputting the predicted cognitive performance to a data file.

19. The method according to claim 13, wherein said outputting step includes outputting the predicted cognitive performance to a printing device.

20. The method according to claim 13, further comprising formulating the time of day values to represent a curve having a period of 24 hours.

21. The method according to claim 20, wherein the curve includes a first sinusoidal curve having a 24-hour period and a second sinusoidal curve having a 12-hour period.

22. The method according to claim 13, wherein the time of day values represent a curve having a period of 24 hours.

23. The method according to claim 13, wherein the data series is obtained from a device attached to the individual.

24. The method according to claim 13, wherein the data series is an output of a sleep scoring system.

25. The method according to claim 13, wherein the selecting step selects from a group consisting of a wake function, a sleep function, a delay function, and a sleep inertia function.

26. The method according to claim 13, wherein the selecting step selects from a group consisting of a wake function, a sleep function, and a sleep inertia function.

27. The method according to claim 13, wherein the selecting step includes

determining the present state for the data series as either a wake state or a sleep state,

calculating a length of time in the present state, and

selecting the function based on the length of time in the present state and the present state.

28. The method according to claim 13, wherein the first calculating step calculates a cognitive performance level as